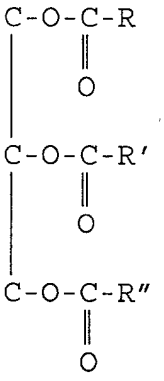
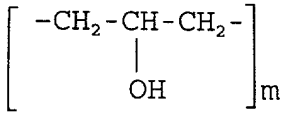
We Claim:

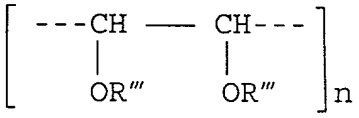
1. A modified vegetable triglyceride characterized by the following formula:



wherein R, R′ and R″ are independently selected from C-7 to C-21 aliphatic fatty acid residues, each including the structures:



and



wherein R‴ is H or C-2 to C-10 straight chain or branched hydrocarbon;

wherein the ratio of R‴=hydrocarbon : R‴=H in said modified triglyceride is at least 90:10;

wherein m=0-1;

wherein n=0-3; and

wherein the average $\sum$ n for R, R′ and R″ in said modified triglyceride is at least 1.

2. The modified vegetable triglyceride of Claim 1, wherein R, R′ and R″ are C-17 aliphatic fatty acid residues.

3. The modified vegetable triglyceride of Claim 1, wherein the average $\sum$ n for R, R′ and R″ in said modified triglyceride is at least 3.

4. The modified vegetable triglyceride of Claim 1, wherein the average $\sum$ n for R, R′ and R″ in said modified triglyceride is in the range of 3-7.

5. The modified vegetable triglyceride of Claim 1, wherein R‴ is a C-4 to C-8 straight chain hydrocarbon.

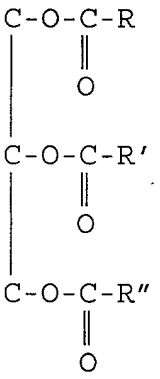
6. The modified vegetable triglyceride of Claim 1, wherein R‴ is a C-6 straight chain hydrocarbon.

7. The modified vegetable triglyceride of Claim 1, wherein m=1.

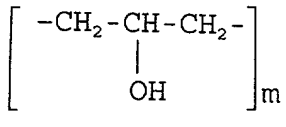
8. A modified vegetable triglyceride of Claim 1, wherein said vegetable triglyceride is selected from the group consisting of cotton seed oil, castor oil, canola oil, linseed oil, oiticica oil, safflower oil, soybean oil, sunflower oil, corn oil, and tung oil.

9. A modified vegetable triglyceride of Claim 1, wherein said vegetable triglyceride is soybean oil.

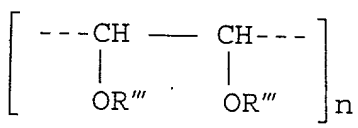
10. A method for preparing a modified vegetable triglyceride characterized by the following formula:



wherein R, R′ and R″ are independently selected from C-7 to C-21 aliphatic fatty acid residues, each including the structures:



and



wherein R‴ is H or C-2 to C-10 straight chain or branched hydrocarbon;

wherein the ratio of R‴=hydrocarbon : R‴=H in said modified triglyceride is at least 90:10;

wherein m=0-1;

wherein n=0-3; and

wherein the average $\sum$ n for R, R′ and R″ in said modified triglyceride is at least 1;

the method comprising reacting an epoxidized vegetable triglyceride having at least one oxirane ring structure with an anhydride selected from the group consisting of acetic, propionic, butyric, valeric, hexanoic, heptanoic, octanoic, nonanoic and n-decanoic in the presence of a

suitable catalyst for simultaneously opening the oxirane ring and activating the anhydride in order to convert each of said oxirane ring structures to a diester derivative.

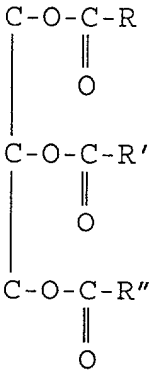
11. The method of Claim 10, wherein said catalyst is boron trifluride etherate.

12. The method of Claim 11, wherein said reacting takes place a temperature of at least 40°C.

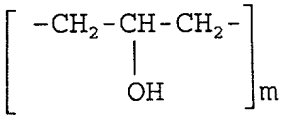
13. The method of Claim 10, wherein said epoxidized vegetable triglyceride is epoxidized soybean oil.

14. The method of Claim 10, wherein said anhydride is hexanoic anhydride.

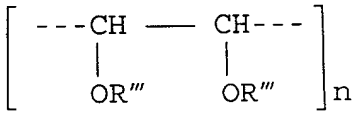
15. A method for preparing a modified vegetable triglyceride characterized by the following formula:



wherein R, R′ and R″ are independently selected from C-7 to C-21 aliphatic fatty acid residues, each including the structures:



and



wherein R‴ is H or C-2 to C-10 straight chain or branched hydrocarbon;

wherein the ratio of R‴=hydrocarbon : R‴=H in said modified triglyceride is at least 90:10;

wherein m=0-1;

wherein n=0-3; and

wherein the average $\sum$ n for R, R′ and R″ in said modified triglyceride is at least 1;

the method comprising:

a. refluxing an epoxidized vegetable triglyceride having oxirane ring structures in an aqueous solvent in the presence of a strong acid catalyst in order to hydrolyze the oxirane ring to a dihydroxy intermediate;

b. reacting said dihydroxy intermediate with an anhydride selected from the group consisting of acetic, propionic, butyric, valeric, hexanoic, heptanoic, octanoic, nonanoic and n-decanoic in order to covert said dihydroxy intermediate to a diester derivative.

16. The method of Claim 15, wherein said catalyst is perchloric acid.

17. The method of Claim 15, wherein said refluxing in step (a) is conducted at approximately 100°C.

18. The method of Claim 15, wherein said reacting in step (b) is conducted at room temperature.

19. The method of Claim 15, wherein said epoxidized vegetable triglyceride is epoxidized soybean oil.

20. The method of Claim 15 wherein said anhydride is hexanoic anhydride.

21. An industrial fluid comprising the modified vegetable triglyceride of Claim 1 and another functional component.

22. The industrial fluid of Claim 21, wherein said functional component is selected from the group consisting of extreme-pressure additive, anti-wear additive, pour point depressant, base stock, and diluent.